

CLAIMS

1. A method of providing information, comprising:
receiving an information signal;
providing an LED illumination device wherein the illumination device further
5 comprises an input connection;
providing a processor for converting the information signal into an illumination
control signal; and
communicating the illumination control signal to the input connection wherein
the illumination device changes color corresponding to the information signal.
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2. A method of claim 1 wherein the information signal is generated from at least
one of a data base, world wide web, network information, software program, and an
information transmission.
- 15 3. A method of claim 2 wherein the information signal comprises of at least one of
financial information, environmental information, computer status information,
notification information, email notification information, and status information
4. A method of claim 1 wherein the processor is at least one of a controller,
20 addressable controller, microprocessor, microcontroller, addressable microprocessor,
computer, programmable processor, programmable controller, dedicated processor,
dedicated controller, computer, and laptop computer.
5. A method of claim 1 wherein the LED illumination device comprises:
25 at least two LEDs wherein the at least two LEDs produce at least two different
spectra;
a second processor;
at least two controllers wherein the controllers independently control power
delivered to the at least two LEDs;
30 the at least two controllers further comprising a signal input wherein the signal
input is associated with the illumination processor;

the at least two controllers are responsive to signals communicated to the signal input; and

a light transmissive material wherein the LEDs are arranged to illuminate the light transmissive.

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6. A method of providing information comprising:

providing an LED illumination device wherein the illumination device comprises at least two LEDs wherein the at least two LEDs produce at least two different spectra;

providing a processor; at least two controllers wherein the controllers independently control power delivered to the at least two LEDs, the at least two controllers further comprising a signal input wherein the signal input is associated with the processor; the at least two controllers being responsive to signals communicated to the signal input; and

providing a light transmissive material wherein the LEDs are arranged to illuminate the light transmissive material; a signal input connection wherein the signal input connection is associated with the processor,

providing an information signal to the signal input connection;

wherein the processor converts the information signal into an illumination control signal; and the illumination device changes color corresponding to the information signal.

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7. A method of claim 6 wherein the processor is at least one of a controller, addressable controller, microprocessor, microcontroller, addressable microprocessor, computer, programmable processor, programmable controller, dedicated processor, dedicated controller, computer, and laptop computer.

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8. An information system comprising:

at least two LEDs wherein the at least two LEDs produce at least two different spectra;

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a processor;

at least two power wherein the power independently control power delivered to the at least two LEDs;

the at least two power further comprising a signal input wherein the signal input is associated with the processor;

the at least two controllers are responsive to signals communicated to the signal input; and

5 a light transmissive material wherein the LEDs are arranged to illuminate the light transmissive;

an information signal input wherein the information signal input is associated with the processor.

10 9. An information system of claim 8 further comprising a second processor wherein the second processor is associated with the processor; wherein the second processor converts an information signal to lighting control signals and communicates the lighting control signals to the processor.

15 10. An information system of claim 9 further comprising a user interface wherein the user interface is associated with the second processor.

11. An information system of claim 10 wherein the user interface is at least one of a computer, web browser, web site, touch screen, LCD screen, plasma screen, and laptop computer.
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12. An information system of claim 9 wherein the second processor is at least one of a computer, microcomputer, microprocessor, and laptop computer.

25 13. A method of providing information comprising:
receiving an information signal wherein the information signal is formatted as a lighting control signal;
providing an LED illumination device wherein the illumination device further comprises an input connection; and
30 communicating the information signal to the input connection wherein the illumination device changes color corresponding to the information signal and the hue, saturation and intensity of the color represent the received information.

14. A method of claim 13 wherein the LED illumination device comprises:
at least two LEDs wherein the at least two LEDs produce at least two different spectra;
a processor;
5 at least two controllers wherein the controllers independently control power delivered to the at least two LEDs;
the at least two controllers further comprising a signal input wherein the signal input is associated with the processor;
the at least two controllers are responsive to signals communicated to the signal
10 input; and
a light transmissive material wherein the LEDs are arranged to illuminate the light transmissive.
15. A method of converting an information signal into a lighting control signal comprising:
providing a user interface wherein a user selects information to be displayed by an LED illumination device;
providing a processor for converting the selected information into a lighting control signal; and communicating the lighting control signal to an output port.
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16. A method of claim 15 wherein the information is selected from at least one of a web site, web page, hyperlink, computer setting, computer system setting, email setting, computer monitor software, monitoring software, and computer software.
- 25 17. A method of claim 15 wherein the processor is at least one of a computer, microcomputer, microprocessor, and laptop computer.
18. A computer peripheral comprising:
at least two LEDs wherein the at least two LEDs produce at least two different
30 spectra;
a processor;
at least two controllers wherein the controllers independently control power delivered to the at least two LEDs;

the at least two controllers further comprising a signal input wherein the signal input is associated with the processor;

the at least two controllers are responsive to signals communicated to the signal input;

5 a light transmissive material wherein the LEDs are arranged to illuminate the light transmissive; and

an information signal input wherein the information signal input is associated with the processor.

10 19. A computer peripheral of claim 18 wherein the processor is at least one of a controller, addressable controller, microprocessor, microcontroller, addressable microprocessor, computer, programmable processor, programmable controller, dedicated processor, dedicated controller, computer, and laptop computer.

15 20. A computer peripheral of claim 18 wherein the at least two controllers are at least one of a pulse width modulator, pulse amplitude modulator, pulse displacement modulator, resistor ladder, current source, voltage source, voltage ladder, and voltage controller.

20 21. A method of decoding information capable of being executed by a processor comprising:
providing a user interface wherein images representing information are displayed;
selecting information from the user interface;
converting the information to a lighting control signal; and communicating the
25 lighting control signal to a communication port.

22. A method of claim 21 wherein the user interface comprises a computer.

30 23. A method of claim 21 wherein the communication port comprises an USB port, serial port, parallel port, firewire port, optical port and high speed communication port.

24. A method of providing illumination in response to information, comprising:

providing an illumination system capable of providing a plurality of illumination effects in response to a control signal;

providing an information system capable of handling information and providing an input to the illumination system; and

5 controlling the illumination system to illuminate an environment in response to the information condition.

25. A method of claim 24, wherein the information system is connected to a computer network.

10 26. A method of claim 25, wherein the information is selected from the group consisting of stock information, account information, account balance information, transaction information, transaction completion information, trade information, trade completion information, gaming information, betting information, gambling information, net worth information, rainfall information, task completion information, financial information, weather information, sports information, business information, personal
15 information, temperature information, weather prediction information, traffic information, news information, flight information, travel information, itinerary information, humidity information, computer information, performance information, water level information, maintenance information, security information, safety information, alarm information, environmental condition information, personal
20 information, communication information, message information, health information, game information, and entertainment information.

27. A method of claim 24, wherein the illumination system is disposed on a tile that is illuminated to reflect the information from the information system.

25 28. A method of claim 24, wherein the illumination system illuminates an appliance to reflect information about the condition of the appliance.

29. A method of claim 28, wherein the appliance is selected from the group consisting of an oven, a microwave oven, a radio, a refrigerator, a washer, a dryer, a dishwasher, a toaster, a toaster oven, a mixer, a blender, a game system, a game console, a personal game system, a handheld device, a handheld game system, a cellular phone, a

phone, a personal digital assistant, a network computer, a laptop computer, a computer, a laptop, a personal computer, a server, a television, a VCR, a DVD player, a receiver, a stereo system, a satellite receiver, a cable box, a compact disc player, and a speaker.

30. A method of claim 29, further comprising providing an enclosure for the
5 appliance that is adapted to be illuminated by the illumination system in a plurality of colors.

31. A method of claim 24, wherein the illumination system is capable of a plurality of modes of illumination.

32. A method of claim 31, wherein the illumination system is capable of varying at
10 least two of hue, saturation, on-off and intensity as indicators of information.

33. A method of claim 24, wherein the illumination system is configured to send
information to a second device.

34. An information system, comprising:
15 a receiver for receiving an information signal;
an LED illumination device wherein the illumination device further comprises an input connection;
a processor for converting the information signal into an illumination control signal; and
20 a controller for communicating the illumination control signal to the input connection wherein the illumination device changes color corresponding to the information signal.

35. A system of claim 34 wherein the information signal is generated from at least
25 one of a data base, world wide web, network information, software program, and an information transmission.

36. A system of claim 35 wherein the information signal comprises of at least one of
financial information, environmental information, computer status information,
30 notification information, email notification information, and status information

37. A system of claim 34 wherein the processor is at least one of a controller, addressable controller, microprocessor, microcontroller, addressable microprocessor, computer, programmable processor, programmable controller, dedicated processor,
5 dedicated controller, computer, and laptop computer.

38. A system of claim 34 wherein the LED illumination device comprises:
at least two LEDs wherein the at least two LEDs produce at least two different
spectra;

10 a second processor;
at least two controllers wherein the controllers independently control power delivered to the at least two LEDs;
the at least two controllers further comprising a signal input wherein the signal input is associated with the illumination processor;
15 the at least two controllers are responsive to signals communicated to the signal input; and
a light transmissive material wherein the LEDs are arranged to illuminate the light transmissive material.

20 39. An information system, comprising:
an LED illumination device wherein the illumination device comprises at least two LEDs wherein the at least two LEDs produce at least two different spectra;
a processor;
at least two controllers wherein the controllers independently control power
25 delivered to the at least two LEDs; the at least two controllers further comprising a signal input wherein the signal input is associated with the processor; the at least two controllers being responsive to signals communicated to the signal input; and
a light transmissive material wherein the LEDs are arranged to illuminate the light transmissive material; a signal input connection wherein the signal input connection
30 is associated with the processor,
wherein the processor converts the information signal into an illumination control signal and the illumination device changes color corresponding to the information signal.

40. A system of claim 39, wherein the processor is at least one of a controller, addressable controller, microprocessor, microcontroller, addressable microprocessor, computer, programmable processor, programmable controller, dedicated processor, dedicated controller, computer, and laptop computer.

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41. A method of providing an information system comprising:
providing at least two LEDs wherein the at least two LEDs produce at least two different spectra;
providing a processor;
10 providing at least two power sources wherein the power sources independently control power delivered to the at least two LEDs;
the at least two power sources further comprising a signal input wherein the signal input is associated with the processor;
the at least two controllers being responsive to signals communicated to the
15 signal input;
providing a light transmissive material wherein the LEDs are arranged to illuminate the light transmissive; and
providing an information signal input wherein the information signal input is associated with the processor.

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42. A method of claim 41 further comprising providing a second processor, wherein the second processor is associated with the processor; wherein the second processor converts an information signal to lighting control signals and communicates the lighting control signals to the processor.

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43. A method of claim 42 further comprising providing a user interface wherein the user interface is associated with the second processor.

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44. A method of claim 43 wherein the user interface is at least one of a computer, web browser, web site, touch screen, LCD screen, plasma screen, and laptop computer.

45. A method of claim 44 wherein the second processor is at least one of a computer, micocomputer, microprocessor, and laptop computer.

46. An information system, comprising:

a receiver for receiving an information signal wherein the information signal is formatted as a lighting control signal;

an LED illumination device wherein the illumination device further comprises an input connection; and

a controller for communicating the information signal to the input connection wherein the illumination device changes color corresponding to the information signal and at least one of the hue, saturation and intensity of the color represent the received information.

47. A system of claim 46 wherein the LED illumination device comprises:

at least two LEDs wherein the at least two LEDs produce at least two different spectra;

a processor;

at least two controllers wherein the controllers independently control power delivered to the at least two LEDs;

the at least two controllers further comprising a signal input wherein the signal input is associated with the processor;

the at least two controllers being responsive to signals communicated to the signal input; and

a light transmissive material wherein the LEDs are arranged to illuminate the light transmissive.

48. An information system, comprising:

a user interface wherein a user selects information to be displayed by an LED illumination device;

a processor for converting the selected information into a lighting control signal; and

a controller for communicating the lighting control signal to an output port.

49. A system of claim 48 wherein the information is selected from at least one of a web site, web page, hyperlink, computer setting, computer system setting, email setting, computer monitor software, monitoring software, and computer software.

50. A system of claim 48 wherein the processor is at least one of a computer, microcomputer, microprocessor, and laptop computer.

5 51. A method of providing a computer peripheral comprising:
providing at least two LEDs wherein the at least two LEDs produce at least two different spectra;
providing a processor;
providing at least two controllers wherein the controllers independently control
10 power delivered to the at least two LEDs, the at least two controllers further comprising a signal input wherein the signal input is associated with the processor, the at least two controllers being responsive to signals communicated to the signal input;
providing a light transmissive material wherein the LEDs are arranged to illuminate the light transmissive; and
15 providing an information signal input wherein the information signal input is associated with the processor.

52. A method of claim 51 wherein the processor is at least one of a controller, addressable controller, microprocessor, microcontroller, addressable microprocessor,
20 computer, programmable processor, programmable controller, dedicated processor, dedicated controller, computer, and laptop computer.

53. A method of claim 51 wherein the at least two controllers are at least one of a pulse width modulator, pulse amplitude modulator, pulse displacement modulator,
25 resistor ladder, current source, voltage source, voltage ladder, and voltage controller.

54. A system for decoding information capable of being executed by a processor comprising:
a user interface wherein images representing information are displayed and
30 wherein a user may select selecting information from the user interface; and
a converting module for converting the information to a lighting control signal; and a communication facility for communicating the lighting control signal to a communication port.

55. A system of claim 54 wherein the user interface comprises a computer.

56. A system of claim 55 wherein the communication port comprises an USB port,
5 serial port, parallel port, firewall port, optical port and high speed communication port.

57. A method of providing a computer keyboard comprising:
providing at least one LED;
providing a computer keyboard wherein a plurality of keys are associated with
10 the at least one LED to provide the ability to light the associated keys; and
providing a controller wherein the controller includes a program input and
communicates control signals to the at least one LED.

58. A method of claim 57 further comprising:
15 providing software to generate program signals wherein the program signals are
communicated to the program input.

59. An information system, comprising:
an illumination system capable of providing a plurality of illumination effects in
20 response to a control signal;

an information system capable of handling information and providing an input to
the illumination system; and

a controller for controlling the illumination system to illuminate an environment
in response to the information condition.

60. A system of claim 59, wherein the information system is connected to a computer
25 network.

61. A system of claim 60, wherein the information is selected from the group
consisting of stock information, net worth information, rainfall information, task
completion information, financial information, weather information, sports information,

business information, personal information, temperature information, weather prediction information, traffic information, news information, flight information, travel information, itinerary information, humidity information, computer information, performance information, water level information, maintenance information, security information, safety information, alarm information, environmental condition information, personal information, communication information, message information, health information, game information, and entertainment information.

62. A system of claim 60, wherein the illumination system is disposed on a tile that is illuminated to reflect the information from the information system.

63. A system of claim 59, wherein the illumination system illuminates an appliance to reflect information about the condition of the appliance.

64. A system of claim 63, wherein the appliance is selected from the group consisting of an oven, a microwave oven, a radio, a refrigerator, a washer, a dryer, a dishwasher, a toaster, a toaster oven, a mixer, a blender, a game system, a game console, a personal game system, a handheld device, a handheld game system, a cellular phone, a phone, a personal digital assistant, a network computer, a laptop computer, a computer, a laptop, a personal computer, a server, a television, a VCR, a DVD player, a receiver, a stereo system, a satellite receiver, a cable box, a compact disc player, and a speaker.

65. A system of claim 64, further comprising an enclosure for the appliance that is adapted to be illuminated by the illumination system in a plurality of colors.

66. A system of claim 59, wherein the illumination system is capable of a plurality of modes of illumination.

67. A system of claim 66, wherein the illumination system is capable of varying at least two of hue, saturation, on-off and intensity as indicators of information.

68. A system of claim 59, wherein the illumination system is configured to send information to a second device.

69. A method of providing an illumination system for a computer room, comprising:

providing an information system for handling information relevant to the operation of the computers in the computer room;

providing an illumination system capable of control using input from the information system; and

5 controlling the illumination system to provide illumination that reflects an information condition of the computer.

70. A method of claim 69, wherein the information condition is selected from the group consisting of a network condition, a memory condition, a speed, a clock condition, a load condition, an overload condition, a response time condition, a storage condition, a data condition, an environmental condition, a temperature, a humidity condition, a moisture condition, an emergency condition, a fire condition, a smoke condition, a vibration condition, a light condition, and a time condition.

71. A method of claim 69, wherein the information system monitors the performance of a machine and the illumination system illuminates the environment to reflect the performance of the machine.

72. An information system for a computer room, comprising:

an information system for handling information relevant to the operation of the computers in the computer room;

an illumination system capable of control using input from the information system; and

a controller for the illumination system to provide illumination that reflects an information condition of the computer.

73. A system of claim 72, wherein the information condition is selected from the group consisting of a network condition, a memory condition, a speed, a clock condition, a load condition, an overload condition, a response time condition, a storage condition, a data condition, an environmental condition, a temperature, a humidity condition, a moisture condition, an emergency condition, a fire condition, a smoke condition, a vibration condition, a light condition, and a time condition.

74. A system of claim 72, wherein the information system monitors the performance of a machine and the illumination system illuminates the environment to reflect the performance of the matching.

75. A system of claim 72, wherein the information system monitors the performance of a machine and the illumination system illuminates the environment to reflect the performance of the matching.